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VOL. I.—9TH YEAR. SYDNEY: SATURDAY, JUNE 24, 1922. No. 25.

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HISTORICAL NOTES FROM THE RECORDS IN THE BRISBANE HOSPITAL, 1825-1850.[1]

BY E. SANDFORD JACKSON, M.B., B.S. (MELB.),
Brisbane.

THE history of our great institution begins with the arrival in Moreton Bay of Surveyor-General Oxley, of New South Wales, who came in the ship *Amity* with a batch of convicts whose convictions had been multiple, to establish a new settlement for that class of prisoner. They landed at Redcliffe on September 24, 1824. Lieutenant Butler was in command of the military.

The first medical man was, I believe, one Mr. Cowper. To what school of medicine he belonged does not appear in any records that I have been able to find. It seems to go without saying that there was a medical equipment in association with the expedition. It is equally certain that he began his work by erecting tents for the care of the sick under his charge. Of these, though there are no accurate records, he must have had a good many.

The banes of the Moreton Bay Settlement for many years were intermittent fever, dysentery and ophthalmia. The company was much bothered by mosquitoes at Redcliffe and there were a number of cases of malaria. Besides, there were some difficulties with the blacks and some of the white men lost the number of their mess at the hands of the Northern or Bribie tribe. This tribe is specifically mentioned as having been fiercer than those upon Stradbroke Island or Moreton Island.

Oxley had fixed upon Redcliffe as the place for his settlement in his previous visit to Moreton Bay in 1823. Finnigan and Pamphlet, the fishermen from the Five Islands near Illawarra, in New South Wales, who, with their companion, Parsons, had been cast away in the early part of 1823 upon Moreton Island, had directed Oxley to the Brisbane River and taken him on a trip up the river in 1823. Uniacke's journal, which he published on his return, records the assistance of Finnigan and Pamphlet, but Oxley's did not. Uniacke was second in command in the expedition of 1823.

These three castaways were the first white men who lived in Moreton Bay. Parsons was away from the Bay at the time of Oxley's visit in 1823.

The difficulties attributed to the site at Redcliffe, some of which I have mentioned, led to a move to the present site of Brisbane, which took place in the last week of 1824. The settlement was begun then at the new site which had been selected by Oxley, with the approbation of Sir Thomas Brisbane, the Governor of New South Wales, and Sir Francis Forbes, the Chief Justice of New South Wales. It

[1] Read at a meeting of the Queensland Branch of the British Medical Association on April 7, 1922.

began somewhere about the site where the present Government Stores are and spread thence up and down the river, at first chiefly on the north side. The hospital was established upon the site which is now occupied by the Law Courts and we may be sure that its activities were at first carried on under canvas.

The tents were in time replaced by buildings constructed from bricks made by the convicts and from timber sawn at the Government pits. The brick-making and sawyers' work was, of course, done by the convicts. The final structure was formed of a central bar of buildings running parallel with what is now North Quay and the river, with two wings extending from it, so as to form a building in shape like a portion of the letter H. The wings projected from each end of the bar in a northerly direction, that is, towards what is now George Street, and were connected finally at their north ends by other buildings, thus forming a complete quadrangle.

Alongside the hospital on the south-west corner of the site the surgeon's cottage was in due course built of brick and pictures of this, the property of the Queensland Branch of the British Medical Association, are on view.

There is an interesting similitude between the old hospital building and that portion of the present Bowen Bridge institution which is generally known as the "Block Wards." There is a semi-quadrangular disposition of the buildings; a serious error was made in the new institution in that it faces to the east. If it had faced south, the sun in winter and the prevailing summer breeze would have been able to exert their beneficent influence in the quadrangular space between the wings. There are, however, large, wide windows between each pair of beds which have mitigated the difficulty of ventilation somewhat.

The man who was responsible for suggestions which resulted in the ultimate designs of whoever was the architect or builder of our block wards, was Dr. Lansdowne and he had lived in the old building for two years, but had not realized the advantage it was in a semi-quadrangular building to have the wings extending towards the north.

Traces of Dr. Lansdowne's ideas of house building are to be found also in the surgeon's cottage of the Brisbane Hospital. It is almost a replica of the surgeon's cottage in the picture now available in the collection owned by the Queensland Branch. The very doorstep of the cottage was reproduced, in spite of the fact that the doorstep of the old cottage was responsible for at least one strained ankle, that of Miss Barney, daughter of Captain Barney, once Postmaster. The hospital moved in 1866 or thereabouts.

While Dr. Lansdowne was the last to live in the old cottage, he was the first to live in the new and he disappeared from the history of Brisbane in 1868, when he retired an invalid to the old country and Dr. Joseph Bancroft subsequently reigned in his stead.

Harking back to the first surgeon, Mr. Cowper, I find that he remained in charge till 1830 and he held office till 1838, but some time before the year 1830 he appears to have been provided with an assistant in the person of a Dr. Murray. Both their names are to be found in the old hospital records signing requisitions which were sent to Sydney for stores.

Those of you who are at all familiar with the history of Brisbane, will remember that in the year 1830 the Commandant (Captain Logan) was murdered on the Upper Brisbane, probably by the blacks. His body was found by a party of which Mr. Cowper was in charge and there is in Stuart Russell's "Genesis of Queensland," in the appendix a letter from Captain Cluney, who had been next in command to Captain Logan, announcing to the Governor in Sydney the death of Captain Logan and referring to the presence of two doctors in the settlement. Dr. Cowper was obviously one of these and the other was Dr. Murray.

Dr. Murray is described in Captain Cluney's letter of November 6, 1830, as Assistant-Surgeon Murray. It seems obvious, therefore, that he had been appointed to assist Mr. Cowper. He was instructed, says the letter, to accompany Mrs. Logan (and perhaps her infant family) to Sydney, she being in a "delicate state of health," "as in the present healthy state of the settlement the services of one medical officer can be dispensed with for a short time." So Dr. Murray probably came back from Sydney. I do not know how much longer he remained.

As an indication of the responsibilities and trials attached to the duties of the surgeon in a convict settlement, it may be noted that in 1830 Lieutenant-General Ralfe Darling, Governor of New South Wales, made an order, part of which was somewhat as follows: "No number of lashes beyond twenty-five should be inflicted (upon a convict) without the actual presence of a medical officer, who is to be answerable that no greater number of lashes shall be inflicted than the bodily strength of the offender can bear without endangering life." In truth, these pioneering doctors had a hard row to hoe, with their attendance upon the many cases of intermittent fever, dysentery and ophthalmia, without having added to it such an unpleasant and responsible job as that indicated by the order which I have just quoted.

In the records that are available to me, I find mention of another doctor in the settlement somewhere about 1838 whose name was Dr. Alexander. Major Cotton, of the Twenty-Sixth Regiment, had been appointed commandant in 1837 and soon after his arrival undertook a visit by boat to Limestone (Ipswich). He was accompanied by Dr. Alexander, of the same regiment, Mr. Andrew Petrie, an orderly and a convict servant. On the return journey by land the party was bushed for two days and nights. They finally got sight of the river from a mountain (Mount Petrie) near White's Hill and found their way to Lytton, where they fell in with a boat which conveyed them to the settlement.

Major Cotton was appointed to succeed Captain Foster Fyans (1835-1837) in 1837 and it is possible Alexander came with him and was in medical charge of the settlement and its hospital till the arrival of Dr. Ballow in March, 1838. These three are the only names of medical men that I have dropped across up to the year 1838.

In 1838 Dr. David Keith Ballow took command in Her Majesty's General Hospital in Moreton Bay and from his time the clinical notes of the cases were recorded a good deal better and they are available in the hospital books still in its possession. Dr. Ballow was a military surgeon till 1849.

In 1839 all the convicts, except those who were essential to the work of the settlement, were removed. In 1841 free settlers were first allowed into the settlement. Previous to that, without a passport, they were not allowed within fifty miles of the settlement. Some of those settlers on the Downs who had the "explorer's itch," pushed their way through over the Range and down to Ipswich, only to be told by George Thorn that they could not be permitted to finish their proposed journey to the settlement till he had permission to allow them. Such permission was obtained for them as a rule.

So in the records after 1842 one begins to find other than military and bond men in the hospital care. By 1849 the settlement had changed a great deal in character, so that in or about that year even the military were withdrawn.

Dr. Ballow now became no longer a military servant and, quite as if he were in modern times, you can find him in some of his private correspondence reminding the Headquarters Military Authorities that he had been appointed under certain conditions, which he did not think had been fulfilled.

By the year 1843 two other doctors had appeared in the settlement whose names were to become household words in Queensland. They were Dr. Stephen Simpson and Dr. Kearsey Cannan. Dr. Simpson had been so far a part of the military system that in the early 'forties he had taken charge, medically, at any rate, of the establishment for female convicts which was situated at Eagle Farm. On the flats below Ascot and between that suburb and Pinkenba stood until within the last few years portions of a brick building which had been erected, as I have been told, by the female convicts. Doubtless here Dr. Simpson had for the female convicts some sort of adjunct to Her Majesty's General Hospital at Moreton Bay. It was here that the barracks for female convicts was established.

Stephen Simpson came to be a man who was much beloved of the people. He was a homœopath. He had written a book on that science in the old country which had brought him into considerable disfavour with that portion of the profession which regarded itself as the orthodox. He had been in the Army for many years before coming to Australia and served as surgeon in the Fourteenth Light Dragoons and had seen active service. He subsequently travelled extensively on the continent and was attached as medical adviser to a Russian noble family. Thereafter he studied homœopathy under Samuel Christian Friederick Hahnemann, the founder of that cult. Afterwards in England he wrote the book upon homœopathy which drew upon him ridicule from the medical faculty.

He had been engaged to be married for twenty years and in the year before he came to Australia the long engagement came to a happy termination by his marrying the lady of his unwearying affections. Unhappily she died upon his arrival in Sydney about one year after they were married.

Stephen Simpson is mentioned in Tom Petrie's "Reminiscences." That gentleman remembers an occasion when as a little boy he went to Eagle Farm and describes Simpson as smoking a hookah, the tube of which was conducted through the wall of his room. It was lit for him on one side of the partition, while he pulled at the tube on the other side. He was evidently an unusual man! Later on Tom Petrie tells us he took to smoking cigars rather freely. One presumes that the change in his habits took place after he became Commissioner for Crown Lands in 1842, when his duties were less stationary and the hookah became less suitable for the life he was leading.

Somewhere about the year 1847 Mr. Robert Balfour, a young man associated with one of the stations near Cressbrok, as I learn from a private letter in the possession of a friend, was taken ill with some abdominal symptoms. In the course of a few days it was obvious that he was seriously ill and a message was sent to the settlement to request the services of a doctor. Dr. Ballow could not come, because he was the only military doctor at that time in the settlement. Dr. Cannan could not very well come, because he was the only private doctor in the settlement and had some midwiferies waiting. So apparently Dr. Simpson was suggested by them as an alternative and he went to Mr. Balfour's rescue. The rescue, however, was not to be. Mr. Balfour died.

My friend, the son of the man who wrote the letter from which I learned these facts, once remarked to me that it was curious that in those early days the members of his family had been addicted to homœopathy and he was quite surprised when I asked him if he did not see why that was so. His father was offended with Dr. Ballow and Dr. Cannan for not coming to see Balfour and was so grateful to Dr. Simpson, the homœopathist, that he yielded to the fascinations of homœopathy, as presented in the person of Stephen Simpson.

After he became Commissioner for Crown Lands, Stephen Simpson lived, as I have heard it said, for a time at Redbank. Later he moved down the river to the present site of Goodna. There he built a home for himself. He was visited in 1845 by John Dunmore Lang, who describes his visit and the house at Woogaroo Creek.[1] "The site," says Lang, "had been selected with great taste on a ridge overlooking a beautiful bend of the river and Dr. Simpson had spared neither pains nor expense in forming a most picturesque garden in a natural hollow, where the soil consists of the richest alluvial land, intervening between the house and the river, leaving the more ornamental bush trees of the natural forest to give interest and variety to the scene."

This description would fit the site of the old surgeon's cottage in the grounds of the Goodna Asylum, so long occupied by my friends the late Drs. Scholes and Hogg.

In Germany Simpson had contracted an intimate friendship with W. H. Wiseman, who was afterwards Police Magistrate at Rockhampton. They two lived together at Eagle Farm and at Woogaroo

[1] I have since been informed by Dr. Charles Lilley that Simpson lived on Woolston Creek, a mile below Woogaroo, at the homestead known as "Woolston," afterwards owned by Matthew Goggs, Dr. Lilley's grandfather.

and here at all times, like the good old English gentlemen they were, they entertained the wayfarers from Westward Ho! and, as Russell says in his book, showed that they were "men of no mean powers of thought, enriched by no superficial study and tempered by experience beyond the rôle of everyday life." That gifted author says that "the old arm chairs at Eagle Farm and Woogaroo can never be refilled by kinder hosts or more chivalrous gentlemen."

Between Redbank and Goodna is a portion of the stream where the deep channel is very narrow and crosses the river diagonally between two gravelly shallows. It is still marked on the charts as "Simpson's Crossing" and doubtless at that spot many people crossed when they were riding to Brisbane, in which case they would, of course, come down through Pullen Pullen and Moggill on to the Indooroopilly road.

In 1848 Dr. Simpson appears in direct connexion with the affairs of the General Hospital. He was in that year appointed a trustee of the hospital by the authorities (the Governor) in association with Dr. David Keith Ballow, who was then also a Justice of the Peace, William Pickering, John Richardson and George Spottiswoode Le Breton.

Stephen Simpson was called to the Upper House on May 22, 1860, so that he was a member of the first Legislative Council. He died in London on March 11, 1869. That he had paid at least one visit to Europe before he finally retired from Queensland is evident from a note in Lang's book, "Queensland," that he met him as a fellow passenger from Australia to Malta on the voyage by a Peninsular & Oriental steamer by Ceylon and the Red Sea. There was no canal then!

Dr. David Keith Ballow, a Scotchman, as his name indicates, came to the settlement shortly after Major Cotton became Commandant, in March, 1838, and soon after his arrival, if not at once, took charge of the hospital. From that time to the middle of the year 1850 his handwriting is found in the hospital books. He was the author of all the medical records between those years.

Mrs. D. C. McConnell mentions in her little book, which she wrote for family perusal, that soon after her arrival in the *Chaseley* in 1849 Dr. Ballow brought his wife to call on her. Mrs. McConnell speaks of him as "a jolly Scotchman." The photograph in the possession of the Queensland Branch of the British Medical Association, representing the back of the hospital cottage in George Street as it was in 1848 or 1850, shows Dr. Ballow standing on the verandah wearing a low straw hat with a puggaree wound round it and through the window there is dimly to be seen a lady who, it may be surmised, was Mrs. Ballow.

It may be noted here that the *Chaseley* also brought to Brisbane another doctor in the person of Dr. Hobbs, who came out as surgeon on board that ship. His name was in future years to become a by-word for all that was admirable as a much-respected physician.

Dr. Ballow came to the Moreton Bay settlement probably soon after Major Cotton became Commandant. His appointment was, of course, at first a military one and as long as Moreton Bay was a convict settlement his patients belonged to the military and convict classes. His work is recorded, however inadequately, in the old volumes in the hospital, the greater part of which are in his handwriting. His notes, as well as those of Cowper or Murray, are those upon which I depend chiefly for my conclusion that the fever cases of that time were mainly intermittent and of malarial origin and that none of them was typhoid in their time.

Amongst the records of which Ballow was the author, are many interesting things indeed which must be left for another time.

Outside hospital matters Ballow took a prominent place in many ways. Among the old books in the hospital possession is the minute book of the first Pastoralists' Association of Moreton Bay. Ballow was evidently in that swim, but how the book came into his possession is only a matter about which one is left guessing. He was *persona grata* with the squatting class.

Dr. Ballow was, I believe, the only doctor in the settlement till Dr. Kearsey Cannan and Dr. Simpson arrived. Dr. Cannan came to Moreton Bay in 1843, Dr. Simpson before 1842. In May, 1849, the *Chaseley* had brought Dr. Hobbs to remain in the settlement and Dr. Mallon was here also in 1849. Both these men, in January, 1850, were appointed to the Hospital Committee. Dr. Frederick Barton had come in 1845 or 1846 if a note in Lang's "Queensland" is to be trusted.

In 1849, on June 23, the military were finally recalled from Moreton Bay. Dr. Ballow severed his military connexion, but remained in Brisbane and continued in charge of the hospital. He was appointed one of its trustees and at the first meeting of subscribers on January 12, 1849, he became its first resident surgeon at the magnificent salary of £25 *per annum* and residence. Of course, it will be said that he had house and board, perquisites and private practice; but as for the last mentioned there in the hospital is his private ledger of accounts, which shows that he could not have added much to his salary. I do not think he made by private practice double his hospital pay. He and Cannan at least occasionally helped one another. At the next committee meeting his salary was increased to £40 *per annum*.

These men then, Ballow, Cannan, Barton, Hobbs and Mallon, were the representatives of the profession in Brisbane in 1849. In August, 1850, there came into the port a ship called the *Emigrant* with typhus aboard. She had lost a score or more by death, including Dr. Marshall, the surgeon in charge. Upon her arrival she was sent into quarantine at Dunwich. Dr. Mallon went down to take charge. He got typhus and was, of course, put out of action, though he recovered finally.

Dr. Ballow then went down to take his place, but he also was stricken with typhus, of which he died on September 29. And so passed out, a martyr to duty, a man who deserved well of the Brisbane Hospital. There is no record in the hospital of his association with the institution other than what is contained in musty old

volumes which are or should be perforce stowed away in the safe. No one sees them. It is time that a special fire-proof safe was purchased for them and a tablet or other memorial elevated upon the walls of the hospital to commemorate the founders of the hospital, among whom Ballow, Cannan and Simpson were foremost.

A memorial tablet is to be found in St. John's Cathedral, telling of Dr. Ballow's death at Dunwich, and at Dunwich cemetery there stands a memorial stone to him and other victims of typhus.

Dr. Kearsey Cannan played an important part in the development not only of the Brisbane Hospital, but also of the Moreton Bay settlement. He was born in Edinburgh in 1815. He was apprenticed to Dr. Wildash, who practised somewhere in Kent. He took his diploma as a member of the Royal College of Surgeons, London, in 1837. He came to Australia at the age of twenty-six in the *Sovereign*, that ill-fated ship whose timbers afterwards strewed the beach of Moreton Bay Island, upon which she was wrecked in 1847. Dr. Cannan came to Moreton Bay in 1842 and soon after began practice in Queen Street, Brisbane. His first consulting rooms were in the house then occupied by Mrs. Slade, who was at that time postmistress. There, to the inestimable benefit of this Colony, he began the general practice of his profession, which lasted till his death in 1894.

He does not appear in hospital records until 1849, though doubtless he and Dr. Ballow from their first meeting consulted one another about their difficult cases, both inside and outside the hospital. On May 31, 1850, Dr. Ballow, who must by that time have been in private practice, called Cannan in consultation to the case of Mrs. Wickham, the wife of the Police Magistrate, after whom Wickham Terrace was called.

In 1849 began Dr. Cannan's long official association with the hospital. For the next forty-five years his name is found either as visiting surgeon or as consulting surgeon.

In 1849 the hospital had ceased to be a convict hospital. Trustees had been appointed from among the settlers and the institution was being partly supported by public subscriptions. In January of that year the first meeting of the committee appointed by the subscribers was held and Dr. Cannan was appointed visiting surgeon at £30 *per annum*. Thereafter his name appears on innumerable pages of the records and in the records of committee meetings. Both he and Dr. Ballow occupied seats upon the committee.

Ballow and Cannan were in truth the founders of the hospital. One can see how these two men ruled the medical affairs of the settlement from their arrival up to 1850. They were each *persona grata* among its leaders, civilian and official. It was their advice and judgement of the medical needs of the Moreton Bay district which resulted in the establishment of the hospital on a new basis, necessitated by the fact that it had ceased to be under military direction. Thus they laid the foundation upon which has been built the great institution which is now so evident in Bowen Bridge Road. Then it occupied the buildings in George Street, which had formerly been the convict hospital of the old military days.

Dr. Cannan continued as visiting surgeon till 1864, though during that time he once sent in his resignation for a few days. Somewhere in the 'fifties Dr. Hugh Bell's name had been added to the list of visiting surgeons and there came an annual meeting when it was sought to add also the name of Dr. Milford, a new arrival in the settlement. To this Dr. Cannan objected and apparently his objection was upheld to the extent that the number on the list of visiting surgeons was restricted to two. A ballot was taken of the three names, Cannan, Bell and Milford. Milford and Cannan were elected and Dr. Bell was thus thrown out. At the next meeting of the committee came Dr. Cannan's resignation, but it was not accepted. The minutes do not anywhere refer to the matter again. It seems apparent that Dr. Cannan resigned to save Dr. Bell's being rejected, but that Dr. Bell would not accept the sacrifice.

In the year 1864, the same year in which Dr. Barton, who was resident surgeon, died, Dr. Cannan was appointed to the charge of the Lunatic Asylum at Woogaroo and the committee transferred his name to the list of consulting surgeons. He seems to have remained at the asylum only a few years, because he was practising in Hodgson Terrace, George Street, in 1868. In 1876 his name was removed from the list of consulting surgeons and he again became visiting surgeon. He continued to act thus till 1882, in which year he resigned the office of visiting surgeon and was again retired to the list of consultants, upon which he remained until his death in August, 1894.

Altogether he was attached to Moreton Bay settlement and Brisbane for fifty-two years, during forty-five of which he was associated officially with the Brisbane Hospital. During these years his services to the patients were incalculable in their multitude and effect. There are records of operations done by him which would tax the skill and courage of the best men of this day. He was sound in his practice of both surgery and medicine, as they were understood in those days. I was asosciated with him in his latter days, as well as with those who knew the old doctor long before. He was known among them for the elegance of his prescriptions, which suggested, what I have since found to be true, that, like many of his day, he had served an apprenticeship to a master of the art of compounding medicines so as to minimize their nauseating qualities without sacrificing their efficacy.

His social qualities were of the attractive order. He was the welcome companion of the early squatter class, which is sufficient guarantee of his kindliness, his hospitality and his cheery disposition.

Stuart Russell, referring to incidents of 1845 and speaking of Robert Little, afterwards closely associated with the hospital, and Kearsey Cannan, alludes to them as "patriarchs of progress and practice, pioneering powers of pleading and physic in the

pristine period." Quaintly alliterative words, but appreciative testimony to their worth as citizens and men.

Dr. Cannan's social interests included cricket and rowing and the writer can testify to his skill with a billiard cue. At the old game of pool, which preceded the more modern "snooker," he was a perfect master.

Besides his association with the hospital, he played many parts in the public life of the community. He sat for many years on the Board of the Australian Mutual Provident Society, of which he was Deputy-Chairman. He laid the foundation stone of the present building of that Society at the corner of Queen and Edward Streets in September, 1886. He was Chairman of the Medical Board for some years and also held the office of Coroner to the Moreton Bay district in its earlier days.

He was an active member of the Moreton Bay Pastoral Association in 1844 and 1845. He was among the earliest to join the old Volunteer Force and took his share in establishing and fostering the military spirit. This trait in his disposition probably accounts for so many members of his descendants following suit.

The footprints on the sands of time made by Kearsey Cannan during his fifty-one years in Queensland are perhaps growing faint, if we are to judge by what the present generation knows of him, but in Bowen Bridge Road stands the hospital, a monument to him and to Ballow and their friends who rallied round them to set it going, and there is not even a little brass tablet on one of its walls to commemorate their association with it!

When Ballow died Dr. Cannan went down to Dunwich and took charge of the typhus cases from the ship *Emigrant*. He put his tent upon Bird Island, visiting his patients as required from there. Thus, without fully appreciating the reason why, he escaped the louse-borne contagion of typhus. He died in 1894 and was buried at Toowong.

The trustees appointed by the authorities in New South Wales were: Stephen Simpson, J.P., Lands Commissioner; Dr. David Keith Ballow, J.P.; William Pickering, Esq., merchant; John Richardson, Esq., merchant; George Spottiswood Le Breton, Esq., merchant. That is the list as it stands on the first page of the first minute book of the committee.

Dr. Stephen Simpson, I have told you, was in charge of the female convicts at Eagle Farm till 1842, in which year he had been created Commissioner of Crown Lands and had gone to live at Redbank and later at Goodna Creek.

William Pickering, official assignee, owned land along Wickham Street and Ann Street. He was a foundation member of the Queensland Club.

George Spottiswood Le Breton, merchant, probably went to Gayndah afterwards.

W. A. Duncan, the Treasurer, was the first Collector of Customs and owned "Darra," now the Roman Catholic Archbishop's residence. The elevation on which the Bishop's Palace and Convent stand was known as Duncan's Hill and Duncan Street, alongside "Darra," was called after him. He arrived in Brisbane on July 13, 1846. Mr. Duncan took up his official quarters in a small cottage in Queen Street, while the commisariat stores did duty as a bond. He was a staunch Roman Catholic. He added to his duties as Customs Officer those of caretaker of the first Catholic Church. Years afterwards he was promoted to the post of Customs Officer in Sydney, where he died a few years before 1895.

These three medical men, Drs. Cannan, Ballow and Simpson, ably assisted by the committee, laid the foundation upon which has grown the great institution which is now so evident in Bowen Bridge Road, but which, as we have seen, had its beginnings in George Street. To the committee who assisted them in 1849, whose names I append, together with that of their Secretary, honour also is due.

The following list comprises the names of the men who were at the first subscribers' meeting: W. A. Duncan (in the chair), of "Darra," which is now known as Convent Hill. He was first Collector of Customs. John McConnel, of Durundur, who afterwards died at his residence in Bowen Bridge Road, aged 92. William Thornton, who was first tide waiter and afterwards Collector of Customs. John Richardson, who was member for Stanley Boroughs, a merchant, was also a trustee of the hospital. He went to England before 1853 and later managed there the London, Liverpool & Globe Insurance Company in London. George Spottiswood Le Breton, merchant, who was also a trustee. Dr. Ballow was a trustee. John Harris, merchant, of J. & G. Harris, Short Street. G. S. Tucker. Thomas Dowse, who lived at Sandgate. He was the object of an attack by the blacks in that town and he was at one time Town Clerk of Brisbane. He wrote reminiscences. William Wilks, who was appointed Secretary at the first meeting and who was at one time editor of the *Courier*.

The committee appointed at that first meeting included the following gentlemen: Rev. D. Glennie, Anglican clergyman; Rev. J. Harley, Roman Catholic clergyman; Rev. W. Moore, Methodist clergyman; Dr. Stephen Simpson; John Richardson, merchant; Ambrose Eldridge, chemist; John Harris, merchant, of J. & G. Harris; John McConnel, squatter, of Durundur; William Thornton, first tide waiter and afterwards Collector of Customs; William Pickering, official assignee; G. S. Le Breton; Robert Little, solicitor; G. F. Polle, chemist; R. Gill, possibly of Ipswich later and father of a crown solicitor, postmaster.

The first President or Chairman of Committee was Captain John Clement Wickham, Royal Navy, first police magistrate and afterwards Government Resident.

List of Resident Surgeons Between 1825 and 1864.

(1) Mr. Cowper. (2) Dr. Murray. (3) Dr. Alexander (? for a few months). (4) Dr. David Keith Ballow. (5) Dr. William Hobbs, acting for a few months after the death of Dr. Ballow. (6) Dr. Hugh Bell, acting also for a few months in 1853. (7) Dr. Barton, 1850 to 1864.

INDUSTRIAL HYGIENE, WITH PARTICULAR REFERENCE TO CONDITIONS IN AUSTRALIA.

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INDUSTRIAL hygiene has obtained much space in the public health literature of the past few years and it would appear that a certain amount of retrospection is advisable in order to determine what are the essential foundations of the activities marshalled under its banner and their inter-relationship.

The employer, the employee, the medical practitioners and the general public are all concerned. The general practitioner and the hygienist must in most cases be the final arbiters and upon them must rest much of the responsibility for bridging the gap between the science of preventive medicine and the art of industry and manufacture.

As is inevitable in the case of a public health activity concerned with governmental administration and affecting many diverse industries bristling with economic puzzles, there is much misapprehension both as to its nature and scope, so that industrial hygiene is not infrequently viewed with alarm and suspicion by those to whom it most directly pertains. The employer sees in it a sinister design to increase the overhead charges, to coddle the worker and to impose upon the industry more burdens in the way of expensive innovations, to subject him to an ever-increasing supervision at the hands of the authorities. The workman has a deep suspicion that it is another scheme of the capitalist to exploit him, to restrict his liberties and to subject him to efficiency schemes which would tend to bar all but the physically perfect from earning a livelihood. As with the introduction of other efforts to promote the public welfare history repeats itself. It is well that it should. The fire of criticism and antagonism tends to burn away the dross in the form of the faddist, the ignorant enthusiast and the man with a "sure remedy," all too familiar figures to the public health official.

Industrial hygiene has for its object the prevention of illness and death arising from or in the course of occupation. The conservation of health, regardless of what class of society is aimed at, cannot of itself furnish a legitimate cause for quarrel. It is inevitable that the conditions under which men and women are employed and spend the more active hours of their lives must affect and profoundly affect their health and well being. In so far as this influence is unfavourable and susceptible to improvement, it is a legitimate concern of the public health. For the hygiene of industry is not a matter as between the employer and employed, with the factory inspector as referee; it concerns the State. It might as well be said that education is comprised in the mutual relationship between school teacher and pupil. It is not the prerogative of the employer to define the conditions of labour, nor is it the prerogative of the worker to expose himself to adverse conditions of work if he so desires or is indifferent or is willing on account of an increased wage. It is the right and duty of the State to demand safe conditions of employment and that the lives and health of its citizens be not imperilled.

Such information as we have at hand at the present time indicates that the loss of time through sickness by industrial workers averages about ten days per employee per year, certain groups averaging as high as fifteen. The consequent suffering and economic loss to industry and society in general are enormous.

Factory regulations and the steps taken, especially by the larger employers of labour, to safeguard and make sanitary industrial establishments are evidence of the fact that progress is being made. Recent investigations into specific occupational hazards demonstrate that a wider range of interest is being awakened. But before the present sphere of activity can be enlarged upon an intelligent and durable basis a more complete understanding of the underlying public health factors is necessary. Everywhere we see a tendency for industrial organizations to improve their working conditions and to provide medical and surgical relief for their employees. Regardless of motives, whether selfish or purely humanitarian, the benefit to all concerned cannot be doubted. What we do see is that no two establishments attack the problem in the same way or deal with it in the same manner. What appears of importance to one concern is ignored by another in favour of some other activity. It is obvious that in this state of affairs there must be much waste of intention and of effort.

The word industrial, as used in industrial hygiene, does not imply that the following observations do not apply equally to those employed in mercantile and clerical establishments. Wherever men and women are employed, be it factory, mill, store, office or bank, they are subject to the influences of their environment. Specific hazards will vary with the occupation, but the main hygienic factors remain the same.

Mortality and Morbidity Statistics.

The basic foundation for the adequate handling of any enterprise is a knowledge of the subject. In dealing with industrial hygiene such knowledge should include accurate statistical information of the mortality and morbidity experience of industrial workers.

There has been in recent years much research into the effects of specific industrial poisons, notably lead. There has also been a great deal of work done in connexion with fatigue and other effects of environment upon workers in industrial establishments. Physical agents, like dust, have been extensively investigated. In other words, much investigative work has been done in Europe, America and Australia to ascertain the presence of specific health hazards in industry and their effects, actual or probable, on those exposed. Factory regulations have been enacted in the light of the information so gained, so as either to obviate or to lessen these hazards. A few attempts have been made to elaborate minimum standards, as for dust, and to incorporate them into law.

As to whether any particular regulations are effective in securing the desired result, we do not know

and cannot know until we are in a position to ascertain the sickness experience of the group in question.

As our experience progresses, we are becoming increasingly aware that the effects of the ordinary physical environment of industrial workers far outweigh in importance the effects of exposure to specific poisons. As Sir George Newman has stated: "While at first sight accidents, poisoning and a high occupational death-rate are impressive, it cannot, I think, be doubted that the less dramatic side of the problem is, in fact, the more important, namely, the lost time and incapacity due to ill-health. For this is so widely prevalent as to be universal; in all districts, in all ages, in all trades there is this vast mass of wasted life and energy due for the most part to preventible maladies, in their turn largely attributable to remediable conditions of industry or to neglect of hygiene."

Mortality statistics are available to show deaths grouped by various occupations and the knowledge attained thereby is of great value. Such statistics must ignore many of the influences that are most important in their bearing on the health and longevity of the individual; a deceased person may have followed several occupations during his lifetime, one or more of which may have exercised harmful effect upon his health. Were we able to secure information as to the prevailing illnesses among industrial workers, we would have a much more valuable source of knowledge which, when correlated with mortality statistics, would enable us to estimate the effects of occupation upon health with far more certainty. We would be enabled to place our finger upon the sore spots and grapple with specific conditions and facts. Until we have facts in the form of sickness statistics which can be classified by occupation, we cannot escape from conjectures and wrongful opinions.

The obvious sources of this information are the friendly societies, lodges and fraternal insurance associations paying sick benefits; also the metropolitan hospitals and those industrial establishments maintaining ambulance rooms or dispensaries. The bulk of workmen belong to organizations from which they derive sick benefits and in order to secure these benefits they have to present medical certificates. It is apparent that if such certificates were to include the occupation as well as the diagnosis, an immense fund of information would be available, even allowing for the usual amount of error in such certification. It is well within the province of the constituted authorities to require that insurance societies of all types furnish information for statistical purposes, to be utilized for the public health. It may here be stated that in cooperation with the Census Bureau, preliminary steps towards securing this information have already been taken.

It is not to be expected that such a procedure will immediately result in the achievement of the purpose aimed at. The statistician, viewing the situation with a purely mathematical eye, may doubt the value of the information so gained. The public health officer can appreciate the enormous benefit of a gradually improving system of industrial morbidity reports and also realize that there is no good reason why the present possibilities of securing so efficient a weapon should needlessly be wasted.

Securing morbidity statistics from metropolitan hospitals should not be a matter of great difficulty, provided occupation is included in the clinical reports. The records of industrial establishments can be a most valuable guide and afford a valuable cross-section of local industrial conditions. While the total number of industrial workers included in such statistics would be comparatively small, at least for some time to come, the data obtained would be more accurate and could be more carefully corrected than would be possible in the case of ordinary sickness certificates.

The securing and primary classification of such statistics as are discussed above would devolve largely upon State and Governmental statistic and census bureaux. It is only in the light of the experience and knowledge possessed by such bureaux that the most beneficial results would be obtained.

Notification of Occupational Diseases.

Laws for the notification of occupational diseases have been in operation in Great Britain for over twenty years and more recently in some of the States of the United States of America. Admitting that such notification is more difficult than notification of the ordinary communicable diseases and that success can only come with gradual development, nevertheless, if we are to deal with occupational diseases, notification is a primary requisite. It should be understood that we are discussing here the compulsory notification to the health or factory authorities of cases of specific occupational disease, such as lead poisoning or mercury poisoning, quite beside and distinct from the general illnesses of the industrial population, the relation of which to occupation was considered under the previous heading.

Notification has an important bearing upon workmen's compensation laws. The logical tendency to extend the scope of compensation laws to include diseases specifically arising from occupation is everywhere apparent and in several of the Australian States compensation is required in respect of one or two diseases. If such laws are to function intelligently and if we wish to be able to estimate their economic effect, notification of the diseases provided for is a necessity. English experience emphasizes that for notification to operate successfully there must be in the factory inspection office a competent medical officer or medical inspector to deal with the follow-up work of cases reported (Dr. Legge, His Majesty's Medical Inspector of Factories).

Minimum Standards.

Factory regulations are often indefinite and confusing and largely fall short of attaining their object, either because we do not know what constitutes safe and desirable practice in regard to such matters as illumination, dust prevention or heat regulation, or our knowledge is not conveyed in succinct form to the law-making assemblies. Before factories can be properly heated, lighted, ventilated and safeguarded from the hazards of dust, fumes and smoke, there must be clearly set forth in the law

minimum standards covering these subjects, so that both occupier and inspector may have a clear idea of what is required and whether the requirements are observed. Indefinite terms, such as "properly lighted and ventilated," "as harmless as practicable," mean little or nothing. Not infrequently the lack of definite standards has led manufacturers to install expensive apparatus or make extensive alterations which have failed to secure the desired result. For instance certain restrictions are placed upon the employment of females. For identical work one State bars all females, another State bars females under eighteen and another bars females under sixteen. Either one is right and the others wrong or all are wrong or all are right, in which latter case, as in others which might be quoted, the margin of safety is so wide as to work a hardship on both the industry and the worker.

It is obvious that it will be more difficult to formulate some standards than others. Some need only to be expressed in terms sufficiently precise to be ready for acceptance. Others, as, for instance, those pertaining to ventilation in certain industries, can be worked out only by careful study and experience. Generally speaking, the elaboration of minimum standards is a function of the Government; their enforcement is a duty of State factory departments.

Factory Inspection.

Hand in hand with satisfactory standards of hygiene goes factory inspection. Factory inspection calls for a much higher grade of training and education than is commonly realized. A factory inspector should be a most important individual, able to appreciate and assist in overcoming any health hazard that he may meet. A mechanical individual, whose duties comprise merely the infringements of factory regulations, falls far short of both the necessities and possibilities of his position. Properly equipped, he can be of the utmost service to the manufacturer and is the first line of offence in the prevention of industrial hazards. "The inspector should have special technical training in factory architecture, in the theory and practice of factory fire prevention, lighting, ventilation and sanitation—a knowledge of various kinds of dust, their effects and methods of prevention" ("Factory Inspection and Factory Inspectors," George M. Price, *Journal of Industrial Hygiene*, August, 1919). This may seem a somewhat idealistic standard of requirements for a factory inspector and it is certainly not to be arrived at all at once. However, let me quote once more from the same source: "Factory inspection in England began with a high conception of the importance of the function of the factory inspector. The character and status of factory inspectors have never been lowered. There factory inspection has become a highly specialized profession, where specialists, medical, engineering, etc., have been called to take charge of certain phases of factory inspection."

There is, at least, a need that factory inspectors be familiar with the various types of hazards that they would be liable to meet in their tour of duty and be well grounded in the essentials of hygiene. There is nothing in all this that does not conduce to the service and benefit of the manufacturer and the worker. Recent investigations have shown, for instance, that defective illumination, even to a dangerous degree, may be due not to an insufficient consumption of electric current, but to improper types of lights, incorrectly placed and shaded. The relationship between deficiencies of this type and intelligent inspection is evident.

Women and Children in Industry.

The place of women in industry is an assured one, in that they have come to stay, particularly in the textile and clothing industries, while certain other occupations, notably that of telephonist, are almost exclusively theirs.

If we are lacking facts and figures to show the influence of occupation on males, how much more so are we in ignorance of this influence on females. There would appear to be a well-defined opinion among medical men and social workers that industrial conditions are often unfavourable to women, an opinion not usually supported by definite proof. Whether it is warranted or not remains to be seen. The welfare of women and children is a matter second to none in importance to the State and any efforts that tend to clarify this subject, will most certainly repay the time and cost expended. Industry itself has recognized its responsibility and provisions for the comfort and care of female workers are quite general and often in advance of the requirements of factory regulations. Also, they are prohibited from work at unseasonable hours and from specifically dangerous processes. The general wear and tear of industrial life upon women is still unexplored ground. We are assured by factory managers that for certain types of work, particularly monotonous processes, where the same act is continually repeated during the working period, women do better than men. Whether their proficiency in this regard is to their advantage, remains to be seen. In all these questions relating to female labour we are more or less helpless until we can study the incidence of sickness among them in relation to broken time and make a beginning towards substituting fact for opinion.

In dealing with children in industry we are confronted with certain definite facts that demand serious consideration. According to the Commonwealth Statistician ("Official Year Book," No. 14) in the year 1919-1920 there were 18,938 children, including apprentices, under the age of sixteen years employed in Australian factories. He states that there has been "an increase in the number of children employed in factories during the past quinquennial period. This increase is more marked among the females than the males, the respective gains being 2,182 and 1,616." The number of young persons between the ages of sixteen and eighteen is not stated.

It may be necessary from an economic standpoint to employ children. If it be so, the least that the State can insist on is that their health and welfare be safeguarded so that they may become useful and healthy citizens. The years from fourteen to eighteen are those during which great change and development take place. There is no other period

of life so fraught with dangers or necessitating more careful supervision. Particularly is this so if the child is employed and if he is working because of economic stress at home; it is more than probable that his interests are not being properly protected there.

At the present time the various States require that a child before employment present a medical certificate from a reputable medical practitioner, the age being attested. Medical certificates are not required in Victoria for employment in establishments where power is used only to drive sewing machines or where dresses, mantles, clothing, white work, underclothing, skirts, boots and shoes are prepared and manufactured; in the other States these exceptions are not indicated in the law. In all States a number of dangerous trades or processes are prohibited for young persons, specifically defined by age and sex, and the hours of work, daily and weekly, are limited; all very wise precautions, but the legal machinery which enforces these precautions, is not adequate to inform us whether they are effective in accomplishing their purpose.

The following quotation from the report of the "Health of Munition Workers Committee on Juvenile Employment" is most pertinent here:

> Special problems arise in the prevention of sickness among boys and girls. They are less capable than adults of prolonged effort or sustained attention to work. They need vital energy, not only for the maintenance of health, but for growth. Even though there are no immediate signs of ill-health, their future growth and development may become stunted. . . . After a young person has once been admitted to a factory no further medical examination is required, except in the rare instances where the factory inspector may require it. In view of the strain which factory employment may often impose on young boys or girls, it would undoubtedly be an advantage if arrangements could be made for their periodic re-examination. . . . Records, if carefully kept, should not only be of immediate value as to giving early evidence as to the presence of a undue strain, but may prove of more permanent value as to throwing light on the more difficult problems arising out of the effects of occupation upon health.

It should be the primary requisite for the employment of a child, in every sort of industry or factory, that he (or she) be first carefully examined by a medical practitioner specially designated by the State for that purpose, the examination to be made with the proposed occupation of the child definitely in view. "No physician whose duties do not bring him into touch with the occupations concerned, can intelligently judge, in many instances, of the physical fitness of a minor to engage in the occupation" (Safford). No exception should be allowed to this comprehensive physical examination under any circumstances, previous to the employment of a young person under the age of eighteen years.

As long as the child remains employed, until he reaches the age of eighteen, he should be carefully and thoroughly re-examined at least once in six months, the records of previous examinations always being available, so that it may be determined if satisfactory progress is being made in growth and nutrition. The fact that such a procedure may entail extra trouble or expense is not an argument, in the face of the importance of protecting the health of adolescents. The whole subject calls for the cooperation of the health, factory and school authorities.

Conclusion.

The foregoing observations by no means cover the scope of industrial hygiene. They are intended to emphasize certain matters of basic importance that need to be clarified and adjusted by the various agencies having jurisdiction over them, so that industry and industrial workers can have a clear idea of the fundamentals involved. The development of industrial hygiene must be of a halting and groping character and further progress will be impeded until this desired state of affairs is in process, at least, of accomplishment.

FLIES ON A SANITARY SITE AND TYPHOID IN A BOYS' HOME.

By JOHN DALE, M.B., B.S.,
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ON March 9, 1920, at about 12 o'clock noon a visit was paid to a municipal sanitary site where the contents of a large number of pans (about five hundred) are buried each night. The soil consists of pure sand. The trenching is carried out by the deep method, a trench about twelve yards long, three to four feet deep and of width varying from four feet at the top to two feet at the bottom, being apparently sufficient to receive the excreta brought there each day. The shallow method of trenching, which is no doubt preferable, is not followed owing to lack of space.

On the occasion of the visit there was a moderate breeze from the north, the sky was occasionally overcast and heavy showers were falling at intervals.

On arriving at the site it was noticed that a quadrilateral patch of ground was literally black with swallows. It was found that this patch of ground corresponded to those trenches the contents of which had been buried from eight to twelve days before. On examination of the surface from which the swallows were turned away, a large number of freshly hatched flies were seen crawling about. On closer examination numerous small holes of a diameter of about two millimetres were seen on the surface of the sand and it was presumed that these holes were made by the emerging flies. This was easily confirmed and in certain situations it was possible to see flies emerging at the rate of several per minute from a patch of sand six inches square. The flies emerged very rapidly; almost as soon as the frontal sac on the top of the emerging fly's head was recognized breaking through the surface, the fly hopped out. The showers of rain had caused the surface of the sand to "set" tightly, otherwise the channels made by the emerging flies would not have been preserved.

The disturbed swallows returned almost immediately and settled within a few feet of the observer, devouring the flies eagerly. Apparently no other species of birds were availing themselves of the feast.

On digging into the surface of the sand, masses of pupæ were found at a depth of two to four inches. In certain places they were so numerous that, on

making a vertical section of the soil with a spade, the layer in which the pupæ were lying could be seen from a distance as a thin reddish-brown stratum.

The flies were nearly all house flies, *Musca domestica*. A few larger "blow" flies were also seen emerging. Several flies were seized with sterile forceps as they emerged from the sand, a feat of some difficulty, owing to the speed of the process. These flies were crushed in sterile water and cultures were made then from the water on MacConkey plates. Numerous acid colonies resulted, but, owing to pressure of work, no attempt was made to identify the organisms or to make counts.

The occupants of a boys' home not very far removed (about four hundred yards) from the site had been plagued with house flies and twenty-two cases of enteric fever had recently been notified from the home. There were ninety-eight boys in the home, with a staff of nine adults.

The first case occurred about the middle of November, 1920. Three cases were diagnosed during the latter half of December, the diagnosis being undoubtedly delayed owing to the fact that an epidemic of measles was in progress at the time. Thereafter cases occurred during March as follows: On March 8, six; on March 12, three; on March 14, two; on March 16, one; on March 21, three; on March 29, one.

Investigations carried out on March 9 showed that a boy suffering from occasional attacks of slight indisposition since Christmas gave a positive Widal reaction to *Bacillus typhosus*. It is very possible that the children who were taken ill in March, had become infected owing to the presence in the home of this boy, more especially as he had been employed in the kitchen during February. It is remarkable that the last five patients were all boys employed in the dining rooms and scullery. As the matron of the home pointed out, the boys so employed were very apt to finish up any scraps that might come from the boys' table and did come from the adults' table, scraps which under existing circumstances were certainly freely contaminated by flies.

The home was very well kept and the sanitary arrangements were in good order. The closets, however, were of the pan type and there is no doubt that, in spite of careful supervision, the aperture covers or lids of the closets were left open sufficiently often to allow relatively free access of flies to fæces. It is suggested that the last group of "kitchen" patients may have been infected through flies which thus obtained access to the fæces of those boys who were in the incubation period during the early part of March.

The water supply of the home was above suspicion. Milk was sterilized on delivery and used without delay. Examination of the adults in the home revealed nothing suggestive of enteric disease.

The dangerous proximity of the depôt to the boys' home and other dwellings has long been a matter of grave concern to both local and central health authorities, but its removal has been delayed owing to the impending sewerage of the district and the great difficulty of finding an alternative depôt.

The countless flies which hatch out of the excreta trenches, are brought there, of course, as eggs or maggots in the pans from the premises of the individual householder. This brings us to the root of the trouble. It is amazing to find what an amount of ignorance and indifference still exists among the people, even among those relatively well-to-do and well educated, with regard to the proper care of the closet. The lid is generally open; the fæces are usually uncovered. Doctors themselves are not free from blame in this respect.

When the fly maggots have once arrived at the depôt, the difficulty of rendering them innocuous seems almost insuperable in practice. The great majority will hatch out and escape, though that might theoretically be prevented to a large extent by placing some sort of impervious cover, such as sack-cloth impregnated with oil, just beneath the surface of the soil on top of the covered trenches.

Having emerged, the flies may become in various ways a danger to health, a danger which is by no means completely removed by locating the depôt at a "safe" distance. It is probable that large numbers could be destroyed on the site by the constant use of a bait containing sodium arsenite, such as a solution of ten grammes of sodium arsenite and one hundred grammes of molasses in one litre of water, the solution being sprayed on to boughs of evergreens or other impervious surfaces. Such a method has obvious disadvantages, owing to the poisonous nature of the bait, but it is interesting in this connexion to note that flies are definitely reported as being scarce in certain mining localities where considerable quantities of arsenic are liberated into the atmosphere by the roasting of ores and also in the neighbourhood of the plants used for "powellizing" timber, a process by which the timber is impregnated with a solution of an arsenic salt in order to protect it from white ants.

The trapping of flies on a large scale in barrel traps of the fly bottle type should be feasible enough if a sufficiently attractive bait can be secured, but its attractions must transcend those of the various delicacies offered by a sanitary site and refuse dump. A liquid bait prepared by an American company, The Fly Moth Bait & Trap Company, seems to fulfil these requirements very nearly. Though not yet tested on a sanitary site, its efficacy under domestic and stable conditions has been amply demonstrated recently in this State. This bait is worthy of the attention of those interested in fly eradication.

Reports of Cases.

ENCEPHALITIS IN BRISBANE AND IPSWICH.

WE have received an account of an outbreak of encephalitis in Queensland. Seven children suffering from this condition were treated in the Hospital for Sick Children, Brisbane, while several patients were seen in Ipswich. It appears that the onset of the condition is sudden and is characterized by extreme drowsiness with fever. The temperature rises in the early stages to 38.5° C. to 39° C. (101° F. to 102° F.). The patients are constipated and the stools have usually a very offensive odour. There may be paresis of the ocular muscles; ptosis is common and divergent strabismus has been seen in three children. The

thumbs are turned into the palms of the hands, with the fingers closed over the thumbs. Opisthotonos is usually present and may be extreme. As the disease progresses the temperature rises and may reach a high level, 40.5° C. or even higher. The drowsiness increases and may be so intense that the child cannot be aroused. Other children, when aroused, show signs of irritation; if permitted, they relapse into the state of stupor or apparent coma. Convulsions occur and are either unilateral or bilateral. They may last for a few seconds or for minutes and may be repeated at frequent intervals. There is a spastic condition of the limbs in all cases. In some children there has been incontinence of urine and in a few retention has been seen. Photophobia has proved to be a common sign.

Lumbar puncture has been carried out in many instances. The fluid is apparently normal. The pressure is either slightly increased or normal. No bacteria have been recovered by culture from the cerebro-spinal fluid. Attempts to isolate a bacterium from the blood have also proved vain.

The duration of the disease appears to be variable. Death has occurred as early as seventeen hours after the onset of symptoms and as late as the sixth day of disease. No treatment appears to be of any avail. Respiratory failure was the most common immediate cause of death. Death has also occurred during convulsions. Recovery took place of an infant whose age is not given, an infant of six weeks, a boy aged two and a half years and a child aged six years. In the boy aged two and a half years there was complete paralysis of the limbs, lasting about four days. During the course of the following week he began to move his arms and legs. Three weeks after the onset he was able to walk. When recovery occurs, the temperature reaches the normal line on about the sixth day.

No information is available of the histological signs discovered after death.

Reviews.

THE MORPHOLOGIC ASPECT OF INTELLIGENCE.

IN a small volume entitled "The Morphologic Aspect of Intelilgence" Dr. Sante Naccarati gives an account of his search for the morphological characters of the intelligent type.[1] Believing that only a compound physical trait can be a correlative of intelligence, he works on the morphological types described by Giovanni and Viola. These are the microsplanchnic, in which the trunk is small and limb development relatively excessive, the vertical diameters of the body as a whole and its constituents predominating over the horizontal diameters, the macrosplanchnic, in which the reverse is the case, and the normosplanchnic, in which there is a constant proportional relation between vertical and horizontal diameters.

An assumption that intelligent subjects would be more likely to be found among microsplanchnics was based on the following considerations: (*i.*) Bischat has shown that there is a relative independence in growth of the two great systems. The nutritional system, represented by the organs of vegetable life contained within the trunk, is differentiated from the animal system, consisting of the nervous system, muscles and skeleton, the latter being relatively more developed in microsplanchnics and the former relatively more developed in macrosplanchnics. (*ii.*) Viola has claimed that the microsplanchnic is a hyper-evolute type from the point of view of physical development and the macrosplanchnic a hypo-evolute type, the macrosplanchnic showing all the characteristics which differentiate the new-born from the adult and the microsplanchnic showing all the characteristics of the adult in an exaggerated form. The author's belief is that in microsplanchnics there must exist also a like hyper-evolution for mental characteristics. (*iii.*) The microsplanchnics correspond to the hyperthyreoid type: "It is held by endocrinologists that in physiological hyperthyreoidism the organism tends to grow in length rather than in width."

Reference is made to the influence of hormones on mental and physical development and to other agencies which may modify the morphological type.

A positive correlation is found between intelligence score and morphologic index, the microsplanchnics (high morphologic index) giving the more intelligent units. The morphologic index is the ratio of the limb value (length of arm and leg) to the trunk value (an approximate estimate of the volume of the trunk). It is pointed out, however, that since an ideal method of assessing the exact values of the animal and vegetative systems is not possible, "we have to be satisfied with methods which give us approximate results."

The conclusions come to are that microsplanchnics "have more likelihood to be intelligent than macrosplanchnics"; normosplanchnics represent all degrees of intelligence and macrosplanchnics individually may be as intelligent as any other type.

It is questionable if such a complex and elusive factor as intelligence is adequately represented by the score gained in response to so-called intelligence tests; it is doubtful if the author's morphologic index even approximately indicates the relative development of the animal and vegetative systems. A curious discontinuity appears in the experiments. Apparently under three hundred persons were examined and the height-weight ratio, found to be an approximate indicator of the morphologic index, was substituted for it in more than half.

The author is in advance of those who would correlate intelligence with individual physical traits, but his conclusions, although suggestive, will not readily convince the physiologist, who demands something more than approximations in dealing with such important quantities as the animal and vegetative systems.

[1] "The Morphologic Aspect of Intelligence," by Sante Naccarati, M.D., Sc.D., Ph.D.; reprinted from the *Archives of Psychology*, August, 1921. New York, London and Paris: G. E. Stretchert & Co.; Royal 8vo., pp. 44, with one figure and seven tables. Price: $1.10.

PHARMACOGNOSY.

THE world war profoundly dislocated the supply of the majority of drugs, whether synthetic or of animal or vegetable origin, and this dislocation was reflected in enormously enhanced prices. Some drugs were almost unobtainable at any price until new sources of supply or production had been found. For these reasons the science of pharmacognosy is of increased importance and the need for a publication such as Youngken's "A Text-Book of Pharmacognosy"[1] is more vital. Countries such as America and England have had to produce and to grow the drugs they formerly imported and some reliable guide is required for the use of the drug analyst, wholesale and retail pharmacist and the collector of drugs. The book is divided into two parts. Part I. embraces the "Morphologic Consideration of Crude Drugs" and Part II. the "Taxonomic Consideration of Crude Drugs." Now that the natural supply of many drugs is failing, more information is necessary as to the cultivation of medicinal plants, the right time to gather, the possible adulterants and the diseases and pests that may attack crude drugs when stored. This information the author endeavours to supply as clearly and comprehensively as possible. The plant families have been arranged according to their recognized evolutionary order.

Part I. of the book has a most important chapter on fundamental considerations. In this he briefly reviews the various modes of occurrence of crude drugs and emphasizes the need for a correct knowledge of their botanical origin. Drugs should be carefully garbled before use, *i.e.*, all extraneous matter should be removed. Details are given of the insects, mites, moulds and rusts that should be guarded against. The greater part of the work is occupied by the taxonomic consideration of drugs. This is well illustrated by many photographs of the plants of origin, of crude drugs and of microscopic sections of rhizomes, leaves, bark, etc.. At present Australia imports almost the whole of her drug supply. With the steady growth of population the time will soon come when we should make a start not only to grow but also to prepare for use a great part of our drug requirements. For this purpose a book such as the one under consideration is absolutely indispensable.

[1] "A Text-Book of Pharmacognosy," by Heber W. Youngken, Ph.M., Ph.D.; 1921. Philadelphia: P. Blakiston's Sons & Company; Royal 8vo., pp. 538, with 210 figures containing 350 illustrations. Price: $6.00 net.

The Medical Journal of Australia

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Morbus Arcanus.

ANCIENT medical lore belonged to the priests of mythical deities and was composed of astounding imaginings and mysteries. Mediæval medical practice was built up on the haziest foundation of convenient humours and intangible vapours. The ague of relatively modern times was supposed to be conveyed by means of miasmata that no one had ever traced or substantiated. Medicine had been so long confused with mystics that unthinking people of to-day are only too ready to accept any absurd apology for an explanation of a disease. The genesis of scientific medicine has been slow and incomplete. Ignorance is still covered by wild guesses and superstition still plays a not inconsiderable part in the doctrines of the medical practitioner. To some extent the conceptions of pathological processes are still as vague and ill-defined as they were; only the terminology has been altered. It is the duty of the medical profession to analyse, to criticize, to question every dogma until unfounded assumptions are expunged from the registers of fact and are replaced by definite data capable of irrefutable proof. Unfortunately, it has become a habit to label substances, ideas and half-understood phenomena with symbols which convey an impression of profound knowledge enshrouded in scientific mystery. A step further has brought us back to mediæval days, when a disease is frankly termed "mysterious" and the public is asked to stand in awe before an uncanny process which has suddenly made its appearance in their midst.

In 1917 a serious but not very wide-spread form of infective encephalitis, which had attracted attention in New South Wales and Queensland, was spoken of as "the mysterious disease." It was recognized in Broken Hill and was investigated in Townsville. It is possible that the infections called by this name or later by the equally unacceptable term "X disease" were not all of the same nature. The majority, however, ultimately proved to be relatively unusual forms of a disease long known as infantile paralysis or Heine-Medin disease. Dr. A. Breinl established this fact without doubt by his histo-pathological and inoculation experiments. It is well known that acute anterior polio-myelitis is the commonest form of this disease. In 1888 Cordier produced argument in favour of the hypothesis that the disease was due to an infection. Two years later Medin presented convincing proof of this to the International Congress of Medicine. In the year 1907 Wickman published a monograph on the clinical manifestations of the disease and laid the foundation for a scientific study of the underlying pathological process. In 1909 Landsteiner and Popper succeeded in inducing lesions in the spinal cord of a monkey by the injection into the peritoneal cavity of the emulsified spinal cord of a child who had died on the fourth day of an attack of acute polio-myelitis. The lesions were identical with those of the disease. Knoepfelmacher had achieved the same result at about the same time. Then Simon Flexner and several members of his staff began an exhaustive study of the subject and demonstrated that the virus of the disease was capable of passing through a close porcelain filter, that it entered the human body through the mucosa of the naso-pharynx and that it could be cultivated outside the animal body. It is unnecessary to describe in this place the facts and fancies which have emanated from this investigation. As a result, acute polio-myelitis became a well-defined and unmysterious disease.

In the course of many years clinicians have observed a large variety of forms of the same disease. It has therefore to be admitted that Heine-Medin disease is an infection caused by a filter-passing virus which possesses a great affinity for nervous tissue. It may appear as a polio-myelitis, a polio-encephalo-myelitis, a polio-encephalitis. At times cerebellar symptoms have predominated; at times the symptoms have been to a large extent meningitic. Pathological and biological experiments have led to the distinction between *encephalitis lethargica* and Heine-Medin disease, while recent work would

appear to have differentiated these diseases from primary hæmorrhagic encephalitis and a variety of more or less ill-defined forms of encephalitis which may be recognized by their clinical manifestations.

In the early months of this year an epidemic of some form of encephalitis broke out in south Queensland. Again the term "mysterious" appeared and the daily press, always prepared to pander to sensationalism and the desire for novelty, contained paragraphs as fatuous and as absurd as human ingenuity could make them. The public was told that a new disease of alarming deadliness was present in Ipswich and Brisbane; the imagination of the authors of these misleading statements was allowed to run riot in regard to the pathology and epidemiology of an affection which at first was only mysterious in that it had not been identified. Facts and even probabilities were ignored and in their place reckless statements analogous in every particular to those of mystic medicine of the ancient times were substituted.

In the present issue we publish a preliminary, somewhat superficial account of the clinical manifestations of these Queensland infections. A discussion has taken place at a meeting of the Queensland Branch of the British Medical Association on this disease and further information of a proper nature has been presented. An account of this meeting will be published in due course. The opinions of those practitioners who have had the opportunity of observing the patients throughout the attacks of illness, is that this *morbus arcanus* is the same as "X disease" of 1917 and that both are forms of Heine-Medin disease. This conclusion may be accepted tentatively as correct, pending a fuller study of the histo-pathological changes in the central nervous system of patients who have died from the disease and of the infectivity of the brain and spinal cord substance to monkeys. There would seem to be less mystery concerning this disease than exists concerning the majority of diseases which affect the central nervous system. If diseases of which the pathology and ætiology are not understood, are to be known by mystic symbols, such as an X or α, or by terms like mysterious, medical terminology will have to be completely revised.

PROTEIN THERAPY.

THE history of medicine provides repeated proof of the unreliability of estimations of the therapeutic value of medicaments and other agents based on clinical observation or on the recovery rate in a short series of patients. In the clinic there are so many variables that it becomes almost unfeasible to carry out a satisfacftory experiment to ascertain the curative value of a special form of treatment of a particular disease. Unless controls are employed with all the ascertainable factors kept uniform, it is hazardous to ascribe favourable results to the particular drug or method on trial. Statistical evidence, too, is apt to mislead unless the trial extends over a large series of cases and unless the reduction in the mortality is unusually great. When diphtheria antitoxin was first introduced as a specific remedy for diphtheria, the evidence of its curative value was so overwhelming that only the bigoted questioned it. It was shown by the medical officers of the Metropolitan Asylums Board of London that the mortality could be practically eliminated if the serum were given on the first day of disease and that it was higher in proportion to the lateness of its exhibition. An attempt has been made within the past few years to discount the wonderful effects of diphtheria antitoxin because of an alleged curative action of normal horse sereum. This claim has been based on some interesting laboratory experiments dating back as far as 1894. It was shown that the resistance to the lethal effect of cholera bacilli could be raised in rabbits by the intra-peritoneal injection of normal horse serum. The mechanism of the underlying process was not at that time determined. Clinicians, mistaking the significance of this phenomenon, came to the conclusion that horse serum must be endowed with qualities of a curative nature and therefore employed it for enteric fever and various other obstinate infections. At times whole serum was used and at times other forms of protein. Reports on short series of patients were published. As the authors were enthusiastic, the results obtained were startling. It is unnecessary to refer in detail to the many uses to which non-specific protein was put. The therapy was confused and not convincing, although protein as such is not devoid of pharmacological action. It has been shown many years ago by Virchow that all body cells are capable of being stimulated by irritant organic substances and that stimulation is necessary for cell life. Over-stimulation has the effect of paralysing the activities of cells. Thus an irritant stimulant like animal protein, acting on a cell changed by inflammation, would either call forth an extra output of natural function of that cell or, if too intense, would put it out of action altogether. Under certain pathological conditions a mild stimulation of the affected area would no doubt lead to repair by the resumption of normal function. Excessive stimulation would act deleteriously. It is quite conceivable that nucleic acid, some of the less toxic amino-acids or even whole protein could stimulate the spleen, liver or bone marrow to produce immune bodies, such as bacteriolysins, aggressins or other specific amboceptors, and thus con-

tribute to the control of an infection. On the other hand, if the sources of these immune bodies be already working at high pressure in response to bacterial stimuli, the protein stimulation would no doubt do harm by paralysing their action.

Dr. Isidor Kross has recently endeavoured to ascertain whether there is any scientific basis for the assumption that nucleinic acid and other proteid substances exert any curative action on infections.[1] He chose *Bacillus typhi murium* as a suitable infection for white rats and treated the infected animals with protein injections. In no instance was the protein capable of preventing death. Similarly, when a peritonitis was induced by making a hole either in the stomach or in the intestine, nucleinic acid proved incapable of reducing the mortality. Indeed, recovery ensued in a larger proportion of the control than of the treated rats or rabbits. In the third place, he endeavoured to treat rabbits infected with pneumococci with intra-cardiac injections of protein. The treated animals died as soon as did the control animals. These experiments would indicate that the arbitrary administration of protein, either by subcutaneous, intra-peritoneal or intra-cardiac injection, does not exercise a direct curative effect on infections in general. Whether better results would have been obtained had the animals been affected with a less acute infection and had the protein been given in very small quantities remains to be proved.

While the evidence at present available concerning the protein treatment of infections is devoid of accurate data, more definite information in regard to the action of serum on the soluble toxins has been collected. Dr. D. M. Cowie and Dr. R. M. Greenthal have undertaken some interesting investigations aiming at the elucidation of the apparent antitoxic effect of horse serum in connexion with diphtheria. They have shown that one cubic centimetre of normal horse serum is capable of protecting guinea-pigs against one or more fatal doses of diphtheria toxin. This power has been traced to the protein, since the precipitate formed after treatment with alcohol contains the active substance. They have continued this study and now show that the protein as such has no antitoxic action, but that normal horse serum contains some natural antitoxin.[2] Quantitative experiments revealed that protein prepared by precipitation with alcohol is considerably less active than pure horse serum. In the next place, they have precipitated the globulin with ammonium sulphate. The albumin and the globulin were then washed after precipitation with ethyl alcohol and tested for their antitoxic power side by side. The globulin fraction proved to be the more active. They also tested the globulin and the albumin prepared by precipitation with ammonium sulphate and purified by dialysis without precipitation with alcohol. This series of experiments revealed quite clearly that the globulin fraction was capable of protecting against at least four minimum lethal doses of toxin, while the albumin had no protective power. The authors were unable to effect any protection with other forms of protein, such as guinea-pig serum, rabbit serum, egg white or milk. In the last place, they found that the globulin of normal horse serum possesses antitoxic power against tetanus toxin. It will be noted that the antitoxic power of normal horse serum is entirely analogous to that of immunized horse serum, but is extremely weak. Normal horse serum is obviously of no practical value in the treatment of either diphtheria or tetanus, but the fact remains that it has some group antitoxin which is active toward the toxins of both bacilli.

[1] *The Journal of Medical Research*, January-March, 1922.
[2] *Ibidem.*

BENCE-JONES PROTEINS.

THREE-QUARTERS of a century ago Bence-Jones discovered and described an unusual proteid constituent of urine in association with certain forms of sarcoma of bone. At first this substance was known as Bence-Jones body, but soon it was recognized as an albuminose. For many years the presence of heteroalbumose was regarded as a curiosity of little or no clinical significance. More recently renewed interest has been awakened in this form of protein and various attempts have been made to ascertain the mechanism underlying its appearance in myeloma, leuchæmia, various forms of carcinoma and some affections of the kidney. Chemical analysis has not divulged its origin or the reason for its appearance in the urine. During the past few months Dr. S. Bayne-Jones and Dr. D. Wright Wilson have endeavoured to determine whether this Bence-Jones protein is in reality a single form of protein. Observations on the urine of a patient with proteinuria without any demonstrable pathological lesion revealed the fact that this body could be separated by crystallization as well as by the more ordinary means of precipitation. Following up this lead, they have now produced evidence indicating that it includes a group of proteid substances of similar but not identical nature.[1] They discovered five patients with Bence-Jones proteinuria. From the urine of these people they isolated twelve preparations. In some instances the protein was precipitated with sodium sulphate and acetic acid and dried with alcohol and ether. In others it was coagulated by heat in the presence of acid, while in one spontaneous crystallization occurred. Although care was taken in the preparation of the samples, it was found that all save that occurring in crystalline form included traces of serum albumin. Precipitins to four different samples of protein were prepared by the usual immunizing technique. Tests were instituted and it was found that the crystalline protein was readily distinguishable from the other samples by its behaviour as an antigen. Similar results were obtained when the complement fixation tests were applied. Lastly, they induced hypersensibility by the injection of the various samples and noted a difference of response to the intoxicating dose, according to which sample was used. It thus appears that there are at least two biologically different forms of Bence-Jones protein and probably more. Whether these different forms are associated with special pathological processes, remains to be discovered.

[1] *Bulletin of the Johns Hopkins Hospital*, April, 1922.

British Medical Association News.

SCIENTIFIC.

A MEETING of the Queensland Branch of the British Medical Association was held at the B.M.A. Building, Adelaide Street, Brisbane, on April 7, 1922, DR. G. P. DIXON, C.B.E., the President, in the chair.

Malignant Disase of Glands of the Neck.

DR. E. S. MEYERS showed a patient who had been suffering from a growth of the mucous membrane of the mouth and from whom he had removed the glands of both sides of the neck. The patient, J.S., male, aged fifty-one years, had come to the Brisbane Hospital complaining of a growth in the mouth and swelling of the left side of the neck. The patient had been a healthy-looking man and examination had revealed the presence of a papilloma of the buccal mucous membrane on the left side. The papilloma had been about five centimetres long and 3.7 centimetres wide, extending down to the anterior palatine fold. There had been no evidence of malignancy. There had been an enlarged gland present on the left side of the neck at about the level of the bifurcation of the common carotid artery. Examination of the naso-pharynx and larynx by Dr. Graham Brown had revealed no malignant focus. In October, 1920, under ether anæsthesia, the glands of the left side of the neck, together with the left sterno-mastoid muscle, had been removed by the method of Maitland and Crile. Two weeks later the papilloma had been removed by incision and reflection of the buccal mucous membrane. Histological examination by Dr. Wilton Love had confirmed the diagnosis of papilloma and had failed to show evidence of malignancy in the glands. About seventeen months later the patient had again presented himself at the hospital, complaining of a swelling in the right sub-maxillary region. This had had the appearance of malignant disease of a gland of the neck. Under intra-pharyngeal ether anæsthesia, administered by Dr. F. W. Page, the right common carotid artery had been clamped and the glands, together with the right sterno-mastoid muscle and the internal jugular vein, had been removed. Examination of the lymphatic gland by Dr. J. J. Harris had shown the presence of typical malignant cells. Dr. Meyers thought that the case was an interesting one, in that the papilloma might have been undergoing malignant degeneration prior to removal or for the reason that it might have been one of those cases of malignant disease of the glands of the neck in which no primary focus could be found.

DR. R. GRAHAM BROWN advocated diathermy in addition to surgical treatment for carinoma of the mouth, palate and larynx. He appealed to members to send hospital patients with a history of lumps in the neck to either Dr. Culpin or himself for an opinion on the throat. These patients were often seen too late for any curative treatment.

Carcinoma of the Larynx.

DR. R. GRAHAM BROWN showed a woman, aged fifty-five years, on whom he had operated for intrinsic carcinoma of the larynx a year previously. There were no signs of recurrence.

Hypertrophy of the Tonsils.

DR. R. GRAHAM BROWN showed tonsils that he had removed from a patient. These were the largest that Dr. Graham Brown had ever seen. The patient had enlarged glands in the neck and axilla. The blood count had been normal and microscopically the tonsils had shown simple hypertrophy.

History of the Brisbane Hospital.

DR. E. SANDFORD JACKSON read a paper entitled "Historical Notes from the Records in the Brisbane Hospital" (see page 685).

The discussion, which consisted mainly of reminiscences, was entered into by the PRESIDENT, DR. C. COMYN, DR. LOCKHART GIBSON, HONOURABLE W. F. TAYLOR, SIR DAVID HARDIE, DR. GRAHAM BUTLER, DR. A. C. F. HALFORD, DR. E. S. MEYERS and DR. J. G. AVERY.

DR. E. SANDFORD JACKSON moved and HONOURABLE W. F. TAYLOR seconded the following motion, which was carried:

> That a committee composed of the President and Honorary Secretary of the Queensland Branch of the British Medical Association and the Chairman and Honorary Secretary of the Brisbane General Hospital Clinical Society, with power to add, be formed to consider the best way of permanently recording the work of the pioneers of the Brisbane Hospital.

Medical Societies.

THE MEDICAL SCIENCES CLUB.

A MEETING of the Medical Sciences Club was held at the University of Adelaide on April 7, 1922.

Apparatus for Anaerobic Culture.

DR. L. B. BULL demonstrated the apparatus of McIntosh and Fildes for anaerobic culture of micro-organisms, in which advantage was taken of the catalytic action of palladium upon the combination of oxygen and hydrogen in order to remove all the oxygen from a closed vessel containing the cultures.

Cryptococcus gilchristi.

DR. D. L. BARLOW demonstrated a yeast-like organism found in the cerebro-spinal fluid of a child of five years of age, born in Australia, who had been suffering from chronic meningitis for six or seven weeks. The organism appeared to be identical with that described by Drs. Swift and Bull in THE MEDICAL JOURNAL OF AUSTRALIA of September 29, 1921. Both of these cases of blastomycotic cerebro-spinal meningitis were peculiar in that no skin or lung involvement was associated with the disease. Cases previously reported in the literature had arisen as secondary infections from involvement of the skin or lung. The cerebro-spinal fluid in the case of Drs. Swift and Bull was colourless; in Dr. Barlow's case it had been a faint yellow. Professor Cleland had described a tumour in the iliac region which had been found to be heavily infected with similar organisms. They appeared to be identical with or closely similar to *Cryptococcus gilchristi*.

Foreign Body in Trachea.

DR. R. H. PULLEINE exhibited a portion of the stem of a pipe over 2.5 centimetres in length which had fallen into the trachea of a man who had kicked by a horse and had received in consequence a fracture of the skull. After he had recovered from the fracture he had suffered from incessant coughing. Two years later, after a bout of exceedingly violent coughing, he had ejected this fragment of mouthpiece. During the interim he had travelled over nine thousand miles in the saddle, constantly suffering from fits of violent coughing.

A FURTHER meeting of the Medical Sciences Club was held on May 5, 1922.

Granulomata.

DR. L. B. BULL reported that in 1912 he had examined a section taken from a tumour growing in the neighbourhood of the urethral orifice in a horse, which was a granuloma presenting a striking histological picture. Several other specimens had been obtained from time to time. In 1916 it had been possible to demonstrate in similar tumours the presence of a larval nematode. The conditions appeared to be similar to that known as summer sore in various parts of the world. It had been discovered in Brazil and the part played by a nematode worm in bringing about the condition had been shown there. The worm was a species of *Habronema*. Three species were known to infest horses. *Habronema muscæ* was a parasite of the stomach of the

horse. The eggs passed into the fæces and were swallowed by larvæ of *Musca domestica*, in the body of which they underwent several metamorphoses and eventually they reached the proboscis of the fly.

The skin tumour which occasionally occurred through infestation of these worms, was so characteristic in its structure as to be unmistakable, even when the larvæ were not seen. The sections showed yellowish necrotic areas and within them the cavities which contained the larvæ. He had cut sections of a similar tumour from the conjunctiva of a child of five months, showing almost exactly the same histological picture as the *Habronema granuloma* of the horse. It appeared to be a habronemic conjunctivitis. No larva had been found, but the space it occupied could readily be seen. Two sections, one from a horse and the other from the child, were compared and the resemblance was very striking.

PROFESSOR J. B. CLELAND pointed out that this observation of Dr. Bull's was an instance of the close relationship of veterinary to human medicine. In New South Wales in a certain district horses and cows frequently developed angiomata of the mucous membrane of the bladder and upon these malignant growths sometimes supervened. The ætiology of the condition was obscure. He suggested that it might be traceable to some quality of the water in the districts affected. One possibility was that radium emanation occurred in the water and was excreted through the kidney; in the bladder this would give rise to an irritative condition very similar to the effect of radiation.

He also referred to the neoplasms produced in the stomachs of rats infected with larval worms derived from of cockroach. These had been shown in recent years to produce granulomata which quite frequently led to malignant changes. It had been possible to observe the same sequence of events in the tongue. He held the opinion that epitheliomata of the conjunctiva of the horse might arise from habronemic infections as a secondary result of the irritation induced. Inferences from veterinary to human medicine were, however, not always safe. An instance had been afforded recently. In sections of a granuloma occurring in horses known as botriomycosis, small masses of cocci were visible, even to the naked eye, giving the appearance of mycosis. Cultures from these masses, however, yielded only *Staphylococcus aureus*. Dr. Newland had recently submitted a tumour in the centre of which a granulomatous structure containing masses of cocci similar to those occurring in botriomycosis was seen. The tumour had been removed and the patient had returned with endothelioma. The necrosed areas in the centre of the tumour included masses of secondary staphylococcus infection. This tumour had been mistakenly regarded as an instance of botriomycosis, but it had turned out to be an endothelioma.

DR. HELEN MAYO suggested that the endothelioma might have been a secondary effect of the irritation set up by the botriomycosis. She referred to the fact that in aniline dye factories the incidence of malignant disease of the kidney and bladder was very high.

DR. BULL instanced the occurrence of bran cancer in cattle.

DR. H. S. NEWLAND, D.S.O., drew attention to the frequency of cancer as a result of irritation due to soot and tar. He had met with numerous cases of cancer on the scar of a burn. He referred to the case of a girl who had had her scalp torn off in consequence of an accident. Some years later a secondary epithelioma occurred in the healed scalp and attacked the bone. At the present date in successive operations the whole of the top of the skull had been removed, but no trace of growth had appeared in the *dura mater*.

In another instance cancer occurred in consequence of the friction of a tight wristband.

Dr. Newland suggested that it might be possible without danger to ascertain whether cancer was transmissible by grafting in the human being, as it was in animals. It might be possible to graft a rodent ulcer on an exposed part and, if it grew, to kill it by means of radium and X-ray treatment.

PROFESSOR T. BRAILSFORD ROBERTSON pointed out that difficulties might arise in obtaining a positive result and referred to the fact that, even in animals, inoculation with carcinoma was not invariably successful. Certain strains of rats developed cancer only in 10% or 20%, others in over 90%. The origin of the difference was hereditary. Miss Slye, in Chicago, had found it possible in breeding experiments to obtain strains in which cancer developed spontaneously in a very large proportion, nearly 100%, while in other strains cancer did not develope at all.

DR. NEWLAND suggested that the failures of inoculation might arise from inherited specificity of the blood analogous to the four groups known to occur in human beings.

DR. BULL pointed out that laboratory rats were so thoroughly inbred that they must contain very limited groups. The variability of susceptibility to cancer inoculation could hardly be due to that factor.

PROFESSOR CLELAND drew attention to the fact that it had been frequently observed that epithelioma of the lower lip occurred in persons afflicted with epithelioma of the upper lip and that this had been regarded as arising from accidental grafting.

MELBOURNE PÆDIATRIC SOCIETY.

(AFFILIATED WITH THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.)

A MEETING of the Melbourne Pædiatric Society was held at the Children's Hospital, Melbourne, on April 12, 1922, DR. H. DOUGLAS STEPHENS in the chair.

Paroxysmal Arthralgia.

DR. H. DOUGLAS STEPHENS showed a baby, aged sixteen months, who had been the subject of peculiar attacks for the past five months. According to the mother's description on the occasion of the first attack the child appeared to suffer very acute pain in the left arm, which became red and extremely tender. The mother also stated that she could detect a slight grating in the bone and that after a short period of light rubbing the redness and pain disappeared. One month later the baby had a second attack, which was a repetition of the first. Later on a similar sequence of events occurred in the right arm and a fourth attack was located in the left hip. On every occasion the mother noticed the "grating," rubbed the affected part lightly and observed a rapid subsidence of the changes. The individual attacks lasted a few minutes only and then all was over.

Dr. Stephens pointed out that there was no irregularity about the joints when the attacks occurred and in the intervals the joints permitted of a very good range of movement in all directions. Except some indications of a convulsive tendency, the child was normal and apparently particularly healthy. After the first two attacks affecting the arms he had had skiagrams taken with a view to the detection of a possible cervical rib, but it could not be said that the X-ray photographs disclosed any conclusive evidence of this abnormality, neither did skiagrams of the hip-joints disclose any pathological features.

Fibro-Cystic Disease of Bone.

DR. RUPERT DOWNES, C.M.G., exhibited an extremely interesting series of skiagrams illustrative of extensive fibrocystic disease in the bones of a girl aged five years. It was his intention to report the case history with comments and skiagrams at an early date.

Multiple Osteomata.

DR. DOWNES also demonstrated multiple osteomata occurring in a boy aged fourteen years and showed a further series of skiagrams relating to this patient. Exostoses were distributed over the tibiæ, humerus, radius and ulna of both sides and a number of the phalanges. In the radius of the right side there appeared to be some osteo-malacic change and deformity of the bone. The majority of the bony out-growths were in the neighbourhood of the epiphyseal lines, but others occurred at a distance from these principal sites of origin. On inquiry it had been learned that the boy's sister and also a maternal uncle were similarly affected with multiple exostoses.

Acute Verruca.

DR. ROLAND R. WETTENHALL presented a boy whom he had first seen on March 28, 1922, and who then displayed a fungating growth of the size of a small cherry in the palm of the hand. According to the history elicited from the boy the initial trouble was a "blood blister" which had formed six weeks previously. The contents of this lesion were discharged spontaneously, the blister re-formed and on breaking down a second time discharged what was probably purulent material. The lump which was present before treatment began, then supervened.

Dr. Wettenhall described the condition as a readily bleeding acute verruca and indicated that it might have originated as an infective wart or as an abrasion which subsequently became infected. Under treatment by a pastille dose of X-rays on March 28 and again on April 4 the lesion had practically disappeared.

Abrasions of the Skin.

DR. WETTENHALL next exhibited a girl, aged twelve years, in whom were seen very slowly healing abrasions behind the knees. These abrasions were of some months' duration and in this child, who had always bled and bruised easily, slight brasions developed into wounds which were extremely slow to heal. Very severe scarring and much pigmentation was apparent on the extensor surfaces of the knees, anterior surfaces of the tibiæ and on the forehead.

The skin was very lax, dry and harsh, hypotonia of the muscles permitted of over-extension of the joints and the shortening of the right lower limb was dependent upon congenital dislocation of the right hip-joint. The child was quite bright mentally and had always done well at school.

Jacksonian Epilepsy.

MR. C. W. B. LITTLEJOHN discussed the case of a boy, aged eleven years, who had sustained an injury to the left side of his head seven years ago. No bad effects had been noted until one year ago, when the boy began to experience focal epileptiform seizures. These had affected the right leg and had increased in frequency until they had reached thirty to forty per day.

Neurological and X-ray examinations had not revealed any abnormalities, but on turning down an osteo-plastic flap at operation an unmistakable condition of œdema of the brain had been encountered over the whole of the upper part of the left Rolandic area, extending to the mid-line.

The œdematous area had been relieved as far as possible of the excess fluid and for eight months following the operation no further epileptiform attacks had occurred. Within the last two months, however, there had been a recurrence of the seizures affecting the right leg and in this the boy had seemed to be following the usual course of patients with such conditions, *viz.*, that operation gave relief but that symptoms were apt to recur within two years.

Hirschsprung's Disease.

DR. H. DOUGLAS STEPHENS exhibited a child upon whom he had performed the first stage of the operation for excision of the colon in Hirschsprung's disease. The boy, aged six years, had had no natural motion in the first three years of his life. An enema, to be effective, had to consist of about nineteen litres; the abdominal circumference had been one hundred centimetres.

The operation, which he had performed three weeks previously, had consisted in dividing the ileum at a point about ten to fifteen centimetres from the ileo-caecal junction, bringing the distal portion out into the abdominal wound and planting the proximal end into the sigmoid colon by means of an end-to-side anastomosis.

Cerebro-Spinal Syphilis.

DR. A. P. DERHAM discussed in detail the history of a girl, aged nine and a half years. Since June, 1920, at the age of seven years, she had suffered from vertigo of variable degree and had had a tendency to fall about. She had sometimes fallen suddenly when quite alone and had been reported as having injured herself severely on different occasions, although she had never shown signs of serious injury. Latterly she had felt herself about to fall and had been known, when the fall was imminent, to have handed her doll to someone to hold. The general direction of the fall had been backwards and to the right. In June, 1920, the child had suddenly commenced licking her hands and arms, which thereby had become very much chafed. She had frequently maintained the licking all night and for a considerable period had slept very little. This phase had been succeeded by one in which she would lie awake until 6 a.m. and then sleep until late afternoon. At this stage the disease had been variously diagnosed as St. Vitus's dance and habit spasm.

Tonsils and adenoids had been removed at the Alfred Hospital without any subsequent improvement. The hand licking had ceased for some time, but the child had become progressively worse in walking and at intervals had appeared unable to walk at all. At other times she had walked quite well, but had been disinclined to play with other children and had frequently wanted to lie down.

This girl was the eldest but one of five children. All the other children in the family were alive and well and the mother had had no miscarriages. On inquiring into the family history it had been discovered that the child's paternal grandfather had been an epileptic and had died in a fit. The blood serum of the mother had not reacted to the Wassermann test in January, 1922. An opportunity for taking a sample of the father's blood had not yet arisen, but it had been stated that his blood had been subjected to the Wassermann test on a previous occasion and that no reaction had occurred.

In August, 1921, the patient had been admitted to one of the medical wards of the Children's Hospital. From the ward notes it had been learned that she had exhibited some disorientation on first standing out of bed, Rombergism and a tendency to fall backward, but she had stood firmly after the lapse of half a minute. It had not been possible to demonstrate cerebellar ataxia. Lateral nystagmus, with quick movements of the eyes to the left, had been noted, as also a tendency to laugh inappropriately and to cry unreasonably. She had been considered to be mentally backward, but no other nervous abnormalities had been noted. At that time (August, 1921) the Wassermann test had been applied to the patient's blood serum and cerebro-spinal fluid by the Walter and Eliza Hall Institute. Hæmolysis had occurred in the former, but not in the case of the latter.

In September, 1921, the child had come under the care of Dr. Derham in the Out-Patients' Department. He had regarded the condition as cerebro-spinal syphilis, to which had been probably added a considerable functional element. In consultation with Dr. H. Boyd Graham he had instituted routine anti-syphilitic treatment. One intravenous and eight percutaneous injections of nov-arsenobillon, totalling 3.3 grammes, had been administered, but the girl's symptoms had not definitely improved.

In December, 1921, and January, 1922, she had received four more injections and her symptoms had become worse rather than better; she had dragged her legs and had tottered on tip-toe with her head and chest in front of her centre of gravity.

In February, 1922, she had been again re-admitted as a medical in-patient; the ward notes had been much as before, except that weakness of the arms and a fine tremor of the hands, more pronounced in the right hand, were recorded. The cerebro-spinal fluid withdrawn on February 10, 1922, had been clear and under slightly increased pressure; it had contained no excess of globulin and forty lymphocytes per cubic centimetre. A second application of the Wassermann test to the cerebro-spinal fluid had confirmed the previous failure to react. Skiagraphic examination of the skull and inspection of the *fundi oculi* had disclosed no abnormal features.

Investigation since the child's discharge to the Out-Patients' Department had revealed no definite variation from the foregoing. Further complement fixation reactions of the serum with reference to syphilis and to hydatid disease had been carried out. No reaction occurred in either instance. Examination of the nervous system had elicited a slight lateral nystagmus only and this was variable from time to time; the superficial and deep abdominal reflexes had been very actice, the tendon reflexes had been active, there had been no ankle clonus and the plantar reflex had been of flexor type.

She had exhibited a well-marked fine tremor of both hands, affecting the right hand more than the left to such degree that she had used her left hand to pick up a pencil which she had then placed in her right hand. In spite of this she had been able to carry out fine movements and to sew and draw fairly well. There had been no wasting, shortening or contracture of limbs, but the girl had complained of pain on extending the right knee.

She had never been to school and her education was therefore backward. She seemed intelligent, docile, affectionate, had a good memory and was clean in her habits.

The electrical reactions of the muscles had been twice investigated and found normal on each occasion. When she had fallen the child had not become unconscious and she had not been observed to twitch. She had not complained of diplopia, had suffered only very occasionally from mild headaches and had not been troubled by vomiting.

Dr. Derham discussed as possible underlying pathological conditions in this child (1) disseminated syphilis, involving chiefly the brain stem, (2) early atypical disseminated sclerosis, (3) hysteria, either alone or implanted or one of the foregoing, (4) intra-cranial tumour, (5) primary amentia. Although the diagnosis was possibly the second mentioned, he proposed to carry out treatment on the lines of the first and third conditions he had suggested.

The lateness of the hour did not permit of any general discussion and the meeting terminated with an exhibition of pathological specimens by DR. REGINALD WEBSTER and DR. H. BOYD GRAHAM.

Correspondence.

THE TREATMENT OF MALIGNANT DISEASE BY RADIATION.

SIR: With reference to Dr. Nott's instructive article on "The Treatment of Malignant Disease by Radiation," several of his statements need qualifying.

On page 569 is given a list of conditions suitable for radiation with prospect of cure where "carcinoma of the cervix or body of the uterus (only of course with radium)" is quoted. The very presence of the parentheses suggests either that the author is unacquainted with or has entirely ignored the immense amount of work which has recently been done by deep X-ray therapy, particularly at Erlangen, in this very class of case, where, although the treatment was originally a combination of both deep X-ray therapy and radium, the latter has since been discarded as unnecessary. It is claimed that clinical cures in cases without metastases or profound anæmia are almost certain by this treatment. Of course, much more penetrating rays than usual are required, such as are produced by an impressed voltage of 200,000 volts or more.

Secondly, Dr. Nott states that radiation treatment is unsuitable in infiltrating epithelioma of the tongue and vulva. Nevertheless, Boggs, in the January-February number of *Radium* describes in detail the treatment by radium with photographs illustrating both of these conditions and considers this to be the most efficient method we possess in the treatment of cancer of the mouth and throat.

Lastly, the opinion, "once mestastasis has occurred, all hope of permanent cure has gone," is unduly pessimistic, as I have already quoted cases of sarcoma of the femur with spontaneous fracture and metastases in the skull and also a carcinoma of the breast with metastatic involvement of the vertebræ, which have been at least clinically cured and quite possibly permanently.

Enough has been pointed out to show that deep X-ray therapy deserves to be very much better known and my excuse for writing is the complete absence of any reference whatever to the new methods of applying radiation from which already very great improvements in result, as compared with those obtained with installations of lesser power, have taken place.

Yours, etc.,

H. FLECKER.

24, Collins Street, Melbourne,
May 27, 1922.

SOME ASPECTS OF INSANITY.

SIR: Under the above heading Dr. Griffith says in the May 27 issue of THE MEDICAL JOURNAL OF AUSTRALIA: "I beg to offer a short comment on the . . . ease with which experienced mental specialists may be deceived by patients suffering from hallucinations," etc..

Knowing Drs. Gamble and Hollow, the late and present superintendents of Kew, very well, I referred to Dr. Griffith's letter and they say they have no knowledge of the case referred to. Unless the occasion of Dr. Griffith's visit to Kew was over twelve years ago, it must have been an "acting" superintendent with whom he had the interview. Any "experienced" medical superintendent or for that matter any experienced medical officer knows that he cannot ignore off hand any statement in a medical certificate just because he himself cannot elicit straight away the same evidence and he knows also that any patient under observation can "hold herself in" up to a certain point, but when confronted by a supposed persecutor, or when taken "off guard" when she has familiarized herself with her surroundings and nurses, will give herself away without reserve in regard to delusions. Apparently that is what happened in Dr. Griffith's case.

Medical practitioners may rest assured that Dr. Griffith's experience is a very rare one in the Victorian Lunacy Department, where the "experienced" medical superintendents and medical officers are not bureaucrats or a willing source of worry to their professional brethren. In fifteen years' association with the Lunacy Department I have not heard of a similar case such as Dr. Griffith mentions.

Yours, etc.,

W. A. T. LIND.

Kew, Victoria,
May 29, 1922.

UNCONSCIOUS HUMOUR.

SIR: When I receive THE MEDICAL JOURNAL OF AUSTRALIA I always open it at the last page, in the hope of finding it enlivened by a reactionary opinon or the stinging retort of some aggrieved correspondent.

To add to the gaiety of this dignified journal, might I suggest that an occasional contribution in lighter vein would entertain those of us who still retain a sense of humour.

With this in view I submit the following selection from medical certificates furnished by legally qualified medical practitioners in New South Wales which have come under my notice:

A.B. is suffering from "hammer-toe—condition evidently aggravated by shaking of engine."

C.D. is suffering from "pain in left hypochondrium radiating towards umbilicus and groins and towards spine; embolus of spleen; caused by overheating and chill and afterwards a soaking; not due to patient's fault or misconduct."

E.F. is suffering from "visceroptosis and is quite unfit to perform his customary duties. The immediate cause of this condition was a severe strain of the muscles of the back sustained on February 7, 1922."

G.H. is suffering from "contused right kidney and injury to ileo-hypogastric nerve and will be unfit for work for one week."

J.K. "has just undergone a severe operation for removal of mastoid cells and, as there is pulmonary tuberculosis on the male side of the father's family, I think it is unwise for him to be associated with any tubercular institution." (It was proposed to appoint J.K. to the position of porter at Thirlmere Railway Platform, at which place there is a sanatorium for early cases of tubercular disease.)

L.M. is suffering from "hydrocele of the testicle caused by jarr of the parts owing to jumping off the engine."

Yours, etc.,

T. L. O'REILLY.

Railway Department, New South Wales,
May 31, 1922.

THE UNTRAINED MIDWIFE.

SIR: I have just returned from a call to a case of difficult labour. I have endeavoured for years to undertake all midwifery with trained midwives. I have practically excluded altogether the untrained woman.

To-day I have had to deal with one and during the period of my responsibility I shall feel cause for anxiety. The case was unprepared in all respects—the patient unclean, bowels acting, *pudendum* unshaven and unwashed, the "nurse's" hands filthy and uncared for. On two occasions I prevented "swabbing" with a piece of newspaper from anus to vulva; it happened, however, while my back was turned; and, again, when I was leaving, after delivering with high forceps, I saw the vulva rubbed (after the anus) with the fæces-soiled part of a towel!

This woman is registered under the *Midwives Act* and because I refuse all engagements with her, is able to disaffect many patients. Like all untrained midwives, she keeps alive the spirit of "Gamp" lore which we all wish exterminated and she can give no practical advice to the nursing mother as to the care of the infant. All this is, I know, a common enough experience. I am also aware that the days of the untrained women still practising are numbered; but why, at this stage, when we are all striving for the sake of the people to obtain something better in midwifery, should we as a body tolerate for a day longer these dangerous survivals of incompetence? Can we not as a body act more courageously and give our whole support to the trainees of our hospitals and end this disgrace without delay?

Yours, etc.,

"WYVERN."

May 28, 1922.

Books Received.

ARTIFICIAL LIMBS AND AMPUTATION STUMPS: A PRACTICAL HANDBOOK, by E. Muirhead Little, F.R.C.S. (Eng.),; 1922. London: H. K. Lewis & Company, Limited; Demy 8vo., pp. 319, with 267 illustrations. Price: 18s. net.

INFLUENZA: ESSAYS BY SEVERAL AUTHORS, Edited by F. G. Crookshank, M.D. (Lond.), F.R.C.P.; 1922. London: William Heinemann (Medical Books), Limited; Royal 8vo., pp. 529. Price: 30s. net.

QUESTIONS NEUROLOGIQUES D'ACTUALITÉ: VINGT CONFÉRENCES FAITES À LA FACULTÉ DE MÉDECINE DE PARIS, 1921, par Vingt Auteurs; 1922. Paris: Masson et Cie; Royal 8vo., paper cover, pp. 551, with 142 figures. Price: Frs. 28 net.

RADIUM THERAPY, by Frank Edward Simpson, A.B., M.D.; 1922. St. Louis: C. V. Mosby Company; Crown 4to., pp. 391, with 166 original illustrations. Price: $7.00.

THE INTENSIVE TREATMENT OF SYPHILIS AND LOCOMOTOR ATAXIA BY AACHEN METHODS (WITH NOTES ON SALVARSAN), by Reginald Hayes, M.R.C.S., etc.; Fourth Edition, Revised; 1922. London: Baillière, Tindall & Cox; Crown 8vo., pp. 99, with four plates. Price: 4s. 6d. net.

TEN POST-GRADUATE LECTURES DELIVERED BEFORE THE FELLOWSHIP OF MEDICINE AT THE HOUSE OF THE ROYAL SOCIETY OF MEDICINE, 1919-1920, with a Preface by the Right Honourable Sir Clifford Allbutt, P.C., K.C.B., M.D., F.R.S.; 1922. London: John Bale, Sons & Danielsson, Limited; Demy 8vo., pp. 216. Price: 10s. 6d. net.

THE PLACE OF VERSION IN OBSTETRICS, by Irving W. Potter, M.D., F.A.C.S.; 1922. St. Louis: C. V. Mosby Company; Crown 4to., pp. 138, with 42 illustrations. Price: $5.00.

Medical Appointments.

THE GOVERNOR-GENERAL IN COUNCIL has approved of the appointment, under the *Quarantine Act, 1908-1920*, of the following officers as Quarantine Officers: DR. G. M. HEYDON (B.M.A.), DR. J. BROWN (B.M.A.), DR. F. T. WHEATLAND (B.M.A.), DR. R. D. MCINTOSH (B.M.A.), DR. C. L. PAINE.

* * * * *

DR. R. CUTTLE (B.M.A.) has been appointed District Medical Officer and Public Vaccinator at Leonora, Western Australia.

* * * * *

DR. A. W. MARWOOD (B.M.A.) has been appointed Acting Quarantine Officer, Geelong, Victoria, during the absence on leave of DR. T. J. M. KENNEDY (B.M.A.).

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmain United Friendly Societies' Dispensary Friendly Societies Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phœnix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Proprietary, Limited Manchester Unity Independent Order of Oddfellows Mutual National Provident Club National Provident Association
QUEENSLAND: Honorary Secretary, B. M. A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Institute Hampden District Hospital, Kuridala, North Queensland Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Renmark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington	Friendly Society Lodges, Wellington, New Zealand

Diary for the Month.

JUNE 27.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.
JUNE 28.—Victorian Branch, B.M.A.: Council.
JUNE 29.—South Australian Branch, B.M.A.: Annual General Meeting.
JUNE 30.—New South Wales Branch, B.M.A.: Branch.
JULY 4.—New South Wales Branch, B.M.A.: Council (Quarterly).
JULY 5.—Victorian Branch, B.M.A.: Branch.
JULY 7.—Queensland Branch, B.M.A.: Branch.
JULY 11.—New South Wales Branch, B.M.A.: Ethics Committee.
JULY 12.—Western Australian Branch, B.M.A.: Council.
JULY 12.—Melbourne Pædiatric Society.
JULY 13.—Victorian Branch, B.M.A.: Council.
JULY 14.—New South Wales Branch, B.M.A.: Clinical Meeting.
JULY 14.—Queensland Branch, B.M.A.: Council.
JULY 14.—South Australian Branch, B.M.A.: Council.
JULY 15.—Northern Suburbs Medical Association, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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